REMARKS

Claims 1-12 are pending in the application. Claims 1 and 6 are independent. Claims 5, 9, and 12 are objected to but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

New claims 13 and 14 have been added. Claim 13 is a combination of claims 1 and 5. Claim 14 is a combination of claims 6 and 9. Although claim 9 depends from claim 8 which depends from claim 6. Claim 8 is not needed to satisfy any antecedent bases in claim 9. Therefore, claim 8 has not been made a part of new claim 14.

The Examiner has objected to claims 8 and 11 as being duplicates. However, they are not duplicates. Claim 8 depends from claim 6 and claim 11 depends from claim 7.

Claims 1-4, 6-8, 10 and 11 stand rejected under 35 U.S.C. §103(a) as obvious over Ko et al. in view of Bensaou et al. The Examiner's rejection treats method claim 1 simultaneously with apparatus claim 6 but only refers to the elements of the apparatus claim 6. Therefore, claim 6 will be addressed first.

Claim 6 is drawn to a packet scheduling apparatus as is Ko. Those skilled in the art will appreciate that there are many different ways to schedule the flow of packets through a telecommunication system. Claim 6 provides a bank of memories comprising memory sets for storing incoming packets. Each memory set has a nominal service-

interval associated with it in which time a data packet from the memory set is to be transmitted. The nominal service-interval of one memory set is faster (shorter) than the nominal service-interval of another memory set. According to claim 6, each incoming packet belongs to at least one session and is stored in a memory set. A processing element, coupled to the memory sets, schedules sessions to be serviced until the nominal service-interval of another memory set having a packet to be sent is exceeded.

Ko discloses methods and apparatus for receiving packets belonging to sessions, storing packets in memory, and scheduling the transmission of packets out of memory. Ko does not associate a nominal service-interval associated with a memory set. In addressing this feature of claim 6, the Examiner refers to paragraphs 32-35 of Ko. Those paragraphs and other parts of Ko define a system virtual time which is based in part on the packet throughput of the system and a virtual finish time which is associated with each packet. More particularly, when a packet arrives at the Ko switch, a virtual finish time for that packet is calculated and the virtual finish time is appended to the packet as a time stamp before storing the packet in the queue associated with the packet's session. A packet transmission unit selects a packet having the shortest virtual finish time in each session and sends it to an output link. It is never clearly explained in Ko what is meant by "shortest" virtual finish time; but it is apparently the "soonest" virtual finish time, i.e. the time closest to the system virtual time.

The Examiner incorrectly equates "nominal service-interval" with "virtual finish time" at the bottom of page 2 and the top of page 3 of the rejection. The virtual finish

time associated with each packet in Ko is not at all like the nominal service-interval which is associated with each memory set in claim 6. A "time", as that word is used in the phrase "virtual finish time", is quite different from an "interval". Virtual finish time refers to a point in time, e.g. "2:01 PM" (though the times in Ko likely have a much finer granularity like "2:00:00:01 PM"). An interval is a duration which can occur at any time, e.g. 3 milliseconds. This difference alone is sufficient to distinguish claim 6 from Ko. Moreover, the two concepts differ in another respect as the time in Ko is associated with an individual packet and the interval in claim 6 is associated with an entire memory set.

The Examiner admits that Ko does not disclose scheduling sessions until the nominal service-interval of any memory set having a packet to be sent is exceeded. As discussed above, Ko does not disclose nominal service-interval, so this clause of claim 6 cannot possibly be met by Ko. The Examiner refers to Bensaou as teaching this aspect of claim 6.

Bensaou discloses a distributed scheduling architecture for a wireless ATM network. The Examiner refers to Fig. 6, col. 6, col. 16, and col. 17 of Bensaou as being relevant to claim 6. Fig. 6 shows that queues can have different priorities. Col. 6 teaches three levels of priority: highest, high, and lowest. ATM cells are classified into a level of priority based on a "length of urgency period" which is an interval as opposed to a time. Each individual cell has a length of urgency period associated with it. When a cell arrives at the switch, it is given a low priority and is upgraded to highest priority when its length of urgency period expires. This is similar in some ways to a service-interval of the

present invention; but it is still quite different from the claimed nominal service-interval as will be described below. Cols. 16 and 17 are the claims of Bensaou which merely claim what is described above.

The length of urgency period of Bensaou differs from the nominal service-interval of claim 6. In Bensaou, each individual cell is associated with an interval. In claim 6, a memory set is associated with an interval. Therefore Bensaou does not teach the nominal service-interval of claim 6 and claim 6 is not rendered obvious over Ko in view of Bensaou.

Even if Bensaou had taught a nominal service-interval, it is respectfully submitted that it is completely unclear how Bensaou could be combined with Ko. How would one reconcile virtual finish time with length of urgency? Why would one use both virtual finish time and length of urgency? The Examiner suggests that the combination of these references would add a Quality of Service parameter to Ko. However, Ko already implements QoS via the "agreed speed" parameter which is used to classify sessions and is a factor in calculating virtual finish time. See Ko, Abstract. Thus, even if these two references could be combined, which is highly doubtful, the QoS incentive suggested by the Examiner is lacking.

The Examiner also states that the incentive to combine the references would be to guarantee "accurate per-cell information, such as cell due date, or virtual time". Ko already provides accurate per-cell information, including cell due date and virtual time,

by way of the system virtual time and the virtual finish time. Thus, there would be no reason to look outside Ko to provide these features. In sum, there really is no incentive whatsoever to combine Bensaou with Ko and it is difficult to imagine how they could be combined. Since both references teach different ways of achieving the same results, the combination would result in conflicting methods that would interfere with each other rather than complement each other. Furthermore, since they each teach different ways of accomplishing the same results, they can surely be said to teach away from each other. This fact is a strong indicator that the combination of the references is not obvious. Not only is the combination not obvious, it is likely impossible.

Method claim 1 is similar in scope to apparatus claim 6. As mentioned above, the Examiner has not expressly addressed the features of claim 1, so it is difficult to directly rebut the rejection of claim 1. Nevertheless, it can be noted that claim 1provides for storing sessions in service-groups and assigning each service group a nominal service-interval. The argument made above regarding the differences between virtual finish time and nominal service-interval apply to claim 1 as well. In addition the argument made above regarding the difference between length of urgency and nominal service-interval apply to claim 1 as well. Furthermore, the argument made above regarding the unlikelihood of combining the two references applies to claim 1 as well.

As the remaining rejected claims depend either directly or indirectly from claims 1 or 6, the arguments made above apply to these claims as well.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,

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